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ABSTRACT

Quantitative and qualitative assessment of the adaptations of The Program for Assessing Youth Employment Skills (PAYES) and the Iowa Career Education Inventory are proposed to assess the impact of career education for the handicapped student. Evidence is offered for the conceptual compatibility of the Iowa instrument with Brolin's, Johnson's and Lamkin's career education objectives in special education, specifically in career development stages, career concepts, and content overlap. A comparative summary of the similarity between PAYES and the Brolin competencies is discussed. Targeted special education populations for each instrument are indicated with possible adaptation of measures. Assessing content validity and preparing for a pilot administration of each instrument with selected samples of handicapped students are the strategies proposed to assess the feasibility of adapting PAYES and the Iowa Inventory to offer an empirical set of measures which treat career development as a continuous process spanning grades three through twelve. Profile analysis Hotelling's T square, Mahalanobi's Q square and all types of summary statistics will be used to analyze the quantitative data. Non-quantitative procedures used to analyze the data include: a questionnaire, telephone survey, student testing, and the interviewing of special education students and test administrators. (PN)

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CAREER DEVELOPMENT AND EMPLOYMENT READINESS MEASURES FOR SPECIAL EDUCATION

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Abstract

Few measures of career development or employment readiness attempt to link the career education outcomes of handicapped and non-handicapped students. This paper examines the adaptability and appropriateness of two sets of measures for such a purpose. The Iowa Career Education Inventory offers separate instruments for grades 3, 6, 9 and 12 in a comprehensive model of career development spanning seven domains at each level. The Program for Assessing Youth Employment Skills (PAYES) includes seven measures designed for use with adolescents of limited reading skill. Both sets of measures have been developed by Educational Testing Service (ETS) for use outside special education, but each offers features which may facilitate their adaptation for use with selected groups of special education students. Content similarity between each set of measures and recommended career education curriculum for special education students is examined, and plans for further development of the instruments are proposed.

Introduction

Both legislative and professional support for the concept of preparing special education students to enter the least restrictive education and employment opportunities they can manage have grown since Alice Doescoeudres developed one of the early programs to prepare handicapped children for occupational competence in Belgium in the 1920s (Kolstoe, 1981). Section 504 of the Rehabilitation Act of 1973 (Public Law 93-112) required that handicapped students be provided with a free appropriate public education and mandated that every effort by made to assure the handicapped total participation in society. P.L. 94-142, the Education for All Handicapped Children Act of 1975, expanded these requirements, and the Career Education Incentive Act of 1977 (P.L. 95-207) specified that efforts to help students learn about and prepare to engage in work must be free of bias and stereotyping on the basis of race, sex, age, economic status or handicap (Davis and Ward, 1979).

Professional commitment to the goals of career education and occupational preparation for handicapped students also has been reflected in the growth of special divisions of the Council for Exceptional Children (CEC) and the American Vocational Association (AVA). A 1979 CEC survey sponsored by the Office of Career Education in the then U.S. Office of Education reported close to unanimous agreement that career education is as important for handicapped students as it is for other students (Lamkin, 1980). A 1981 National School Board Association survey of more than 800 school board members pressed the issue still further by

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responding that career education and education for handicapped and gifted children were their greatest concerns (Phi Delta Kappan, 1981).

Substantial support also exists in using career education to help improve opportunities for special education students. Davis and Weintraub (1978) concluded that career education could "give handicapped children the same opportunities to learn about and to prepare for the world of work as non-handicapped students (p. 33)." Kolstoe (1981) notes that while relatively few handicapped students had access to career education programs, "the reality is that career education for the handicapped at the secondary level not only fulfills its purpose effectively, it is an examplary instance of mainstreaming (p. 9)."

Others note the need for a more comprehensive view and approach to career education for the handicapped. Appell (1979) found that little or no attention was paid to elementary and junior high school levels of career development in career education proposals received in the Bureau of Education for the Handicapped. He added that while improved measures for assessment and evaluation had been identified as primary research needs in two earlier conferences on career education for the handicapped, these remained major weaknesses in many career education proposals submitted to BEH. He concluded that "few studies in this admittedly deficient research area are being attempted (p. 9)."

Sitlington and Wimmer (1981) affirm that this is still true in their survey of research priorities in career education for the handicapped conducted through the Division on Career Development of CEC. They called for "a broader research base that will examine all aspects and levels of career education and provide validation of basic career education concepts as they relate to the handicapped population (p. 51)." They offered further evidence that practitioners involved with career education efforts with handicapped students continue to place importance on career-related assessment instruments and evaluation resources which can be validated for use with the handicapped.

Rationale for the Iowa Inventory

Many states have urged schools to integrate career education concepts throughout the curriculum, but Iowa has offered considerable practical guidance to help teachers do so. A ten-year series of studies and projects led to adaptation of Bailey and Stadt's (1973) recommendations for a career development process approach to career education into specific documentation of career activities spanning kindergarten through community college. Among the many products of this long-term development of the Iowa Career Education Model was a K-14 Articulation Guide for Career Education which offered documentation of goals, instructional objectives and recommended activities integrating career education concepts and skills into each grade level and subject area.

One of the attractive features of the Iowa model is that it offers a practical, comprehensive approach to the skills and concepts reflected in the career development process. The model extends seven content domains across four levels and is supported by recommendations for specific classroom and instructional activities which introduce and reinforce career development concepts into related subject areas. Figure 1 compares the career development stages in the Iowa model with recommendations from three similar efforts specifically prepared for special education: Brolin and Kokaska's Career Education for Handicapped Children and Youth (1879), Johnson's Preparing Handicapped Students for Work (1980), and Lamkin's Getting Started: Career Education Activities for Exceptional Students (1980). This comparison illustrates that while some labelling differences exist, the underlying conceptual framework for the Iowa model parallels these three sets of recommendations for career education among special education students extremely well.

Further consistency between the Iowa model and career education for exceptional students emerges in the content domains common to each. Brolin and Kokaska propose three curriculum areas: daily living skills, personal-social skills, and occupational guidance and preparation. These are divided into 22 "competencies" and 102 "subcompetencies" or specific skill areas. Similarly, Lamkin begins with three broad areas: self, society, and career and economics; she then adds 24 career education goals adapted from Bailey and Stadt (1973). The consistency between the Iowa model and her recommendations, therefore, is partly assured because the two are adaptations of the same conceptual approach to career education as a development process.

Figure 1

Career Development Stages Proposed for Special Education and the Iowa Model

Iowa Model	Brolin & Kokaska (1979)	Johnson 1980	Lamkin (1980)
Awareness Grades K-3	Awareness Preschool to adult	Awareness Ages 5-9 years and older	Awareness Grades K-3
Accomodation Grades 4-6	Exploration Grade 6 to adult	Exploration Ages 10-12 and older	Orientation Grades 4-6
Exploration Grades 7-9	Preparation Grade 7 to adult	Exploration Ages 12-14 and older	Exploration Grades 7-9
Preparation Grades 10-12	Placement Grade 12 to adult	Preparation Ages 14-16 and older	Preparation Grades 10-12

The Iowa model's seven content domains also parallel many of the elements of the competencies proposed by Brolin and his colleagues, although as before classification differences remain in each approach. Much of this similarity is reflected in Figure 2, which compares the seven domains in the Iowa model to elements of the strategies proposed for special education students by Brolin (1978), Brolin and Kokaska (1979), and Lamkin (1980).

Figure 1

Common Career Concepts in Proposed Special Education and the Iowa Models

Iowa Model Domains	Brolin	Lamkin
SELF Interests & feelings Mental & physical characteristics	Self-awareness Self-confidence	Self-awareness
INTERPERSONAL RELATIONSHIPS Interaction within groups Interaction between groups	Interpersonal skills	Cooperative social behavior
SELF SOCIETY Societal roles & expectations Social change & technology	Socially responsible behavior	Personal responsibility
DECISION-MAKING SKILLS Setting & achieving goals Decision-making strategies	Decision-making & problem-solving	Decision-making & problem-solving
ECONOMICS Consumers & producers Costs & rewards of work	Managing family finances Managing a home Buying food & clothing	Basic economic concepts in careers, society & lifestyles
OCCUPATIONSL KNOWLEDGE World of work requirements World of work operations	Occupational knowledge & exploration	Awareness of types of concepts of work
WORK ATTITUDES & VALUES School & work behaviors Work incentives	Acquiring appropriate work habits & behaviors	Developing work attitudes, values & discipline

The domains and major themes of the Iowa model are presented in Figure 2. In 1980, the Iowa Department of Public Instruction (DPI) asked for help in developing a comprehensive set of multiple-choice instruments to measure progress in each of these domains. Educational Testing Service (ETS) has been working cooperatively with Iowa teachers, counselors, principals, administrators and DPI staff since the fall of 1980 to develop Iowa Career Education Inventory measures in grades 3, 6, 9 and 12.

Pilot editions of each instrument were designed and written in the spring of 1981 and administered to a state-wide sample of students. Based on analysis of pilot sample data, about 90 of the 350 items in the total battery were revised; just one of the original 350 items had to be dropped entirely. A panel of Iowa educators reviewed both the pilot instruments and the proposed revisions in items. The Field Test Edition of the Inventory was administered to a sample of more than 4,000 students in the fall of 1981; detailed analysis of field test data was underway at the time this report was in preparation.

One of the special features of the Iowa Inventory is the attempt to create a continuous scale from grades three through twelve within each domain. Thus the Iowa Inventory is the first attempt to offer an empirical set of measures which treat career development as a continuous process spanning grades three through twelve. Each domain has been defined and measured cognitively to assess the student's understanding of the relationship between a given concept and career opportunities.

The final test of the appropriateness of the Iowa Inventory for use with special education students will be to extend the sample of students included in subsequent data collection and analysis to selected groups of handicapped children. An intermediate step in this process is reflected in Figure 3, which compares the domains in the Iowa Inventory with major dimensions in the model developed by Brolin and his colleagues. Brolin's recommendations emerged from curriculum design with retarded youth, so there are some elements of the "daily living skills" competencies which are not measured in the Iowa Inventory. However, Figure 3 offers further evidence of the conceptual compatibility of the Iowa instruments with career education objectives in special education.

Figure 3

Content Overlap between the Iowa Career Education Inventory and Career Education Competencies in Brolin's Model

Iowa Inventory Scales	Brolin's Competencies
SELF	
1. Interests & feelings*	Identify interests & abilities (44)** Identify emotions (45) and needs (46) Express feelings of worth (48) Tell how others see him/her (49) Accept praise (50) and criticism (51) Develop confidence in self (52) Understand self-organization (63) Identify major occupational interests (83)
2. Mental & physical characteristics	Understand the physical self (47) Identify major occupational needs (82) and aptitudes (84) Make realistic occupational choices (86)
INTERPERSONAL RELATIONSHIPS	
3. Interaction within groups	Know character traits needed for acceptance (53) Develop respect for the rights and property of others (55) Recognize personal roles (57) Know how to make & maintain friendships (59) Know how to establish close relationships (61) Understand impact of behavior on others (62) Understand the subtleties of communication (75)
4. Interaction between groups	Develop respect for the rights and property of others (55) Recognize authority and follow instructions (56) Know how to listen and respond (58) Understand impact of behavior on others (62) Work with others (88) Accept supervision (90)

* The Iowa Inventory divides each domain into two major themes or strands.

** Brolin's model includes 102 subcompetencies; each number in parentheses is the subcompetency identified in the Brolin recommendations.

Figure 3 (continued)

Iowa Inventory Scales	Brolin's Competencies
SELF & SOCIETY	
5. Societal roles & expectations	Prepare for adjustment to marriage (14) Prepare for raising children (15 & 16) Accept praise (50) and criticism (51) Know proper behavior in public places (54) Develop respect for the rights and property of others (55) Recognize authority and follow instructions (56) Recognize personal roles (57) Establish appropriate relationships (60) Understand impact of behavior on others (62) Identify societal values met through work (77) Accept supervision (90)
6. Social change & technology	Identify societal values met through work (77)
DECISION-MAKING SKILLS	
7. Setting & achieving goals	Develop goal-seeking behavior (64) Understand the need for goals (67) Identify major occupational needs (82) and interests (83)
8. Decision-making strategies	Strive toward self-actualization (65) Look at alternatives (68) Anticipate consequences (69) Know where to find good advice (70) Identify sources of occupational information (81) Make realistic occupational choices (86)
ECONOMICS	
9. Consumers & producers	Make wise expenditures (2) Obtain and use bank and credit facilities (3) Keep basic financial records (4) Calculate and pay taxes (5) Select (6) and maintain a home (7) Purchase food (20) and clothing (27)
10. Costs & rewards of work	Identify the personal values met through work (76) Identify the remunerative aspects of work (75)

Figure 3 (continued)

Iowa Inventory Scales	Brolin's Competencies
OCCUPATIONAL KNOWLEDGE	
11. World of work requirements	Understand classifications of jobs into occupational systems (79) Identify occupational opportunities available locally (80) Identify sources of occupational information (81) Identify occupational aptitudes (84) Identify requirements of appropriate and available jobs (85) Meet demands for quality work (92) Demonstrate occupational safety (93)
12. World of work operations	Follow directions (87) Work with others (88) Work at a satisfactory rate (89) Accept supervision (90) Recognize the importance of attendance and punctuality (91) Search for a job (98) Adjust to competitive standards (101)
WORK ATTITUDES & VALUES	
13. School & work behaviors	Identify the personal values met through work (76) Identify the social values met through work (77) Follow directions (87) Accept supervision (90) Recognize the importance of attendance and punctuality (91) Adjust to competitive standards (101) Maintain occupational adjustment (102)
14. Work incentives	Same as for school & work behaviors, plus Identify the remunerative aspects of work (78)

Rationale for PAYES

The second set of measures which will be examined here comprise the Program for Assessing Youth Employment Skills (PAYES), a battery designed to measure employment readiness skills among poorly reading adolescents. PAYES emerged from nearly nine years of work with Job Corps and other disadvantaged populations whose academic and reading skills were between the fourth and tenth grade level. The instruments rely extensively on illustrations and are designed so that they may be administered orally to students to assure that they are responding to the content of the instrument.

PAYES offers seven measures: Job-Holding Skills, Attitudes toward Supervision, Self-Confidence, Job Knowledge, Job-Seeking Skills, Practical Reasoning, and an Interest Inventory. The instruments are designed to measure the lower bound of employment or training readiness, so it is most likely to be appropriate for use with special education students for whom the concepts and expectations of the Iowa Inventory are too difficult.

Figure 4 offers a comparative summary of the similarity between PAYES and the Brolin competencies.

Figure 4

Content Overlap between the Program for Assessing Youth Employment Skills (PAYES) and Career Education Competencies in the Brolin Model

PAYES Scales	Brolin Competencies
JOB-HOLDING SKILLS	Know characteristics needed for acceptance (53) Know proper behavior in public places (54) Recognize authority and follow instructions (56) Recognize personal roles (57) Follow directions (87) Work with others (88) Work at a satisfactory rate (89) Recognize the importance of attendance and punctuality (91) Meet demands for quality work (92) Demonstrate occupational safety (93)

Figure 4 (continued)

PAYES Scales	Brolin Competencies
ATTITUDES TOWARD SUPERVISION	Know characteristics needed for acceptance (53) Know proper behavior in public places (54) Develop respect for the rights and property of others (55) Recognize authority and follow instructions (56) Accept supervision (90)
SELF-CONFIDENCE	Express feelings of worth (48) Tell how others see him/her (49) Accept praise (50) and criticism (51) Develop confidence in self (52)
JOB KNOWLEDGE	Identify the remunerative aspects of work (78) Understand classification of jobs into occupational systems (79) Identify requirements of appropriate and available jobs (85)
JOB-SEEKING SKILLS	Identify occupational opportunities available locally (80) Identify sources of occupational information (81) Search for a job (98) Apply for a job (99) Interview for a job (100)
PRACTICAL REASONING SKILLS	Follow directions (87) Differentiate bipolar concepts (66) Look at alternatives (68) Anticipate consequences (69)
VOCATIONAL INTEREST INVENTORY	Identify major occupational interests (83)

Target Special Education Populations for Each Instrument

Analysis of the common dimensions of proposed career education curricula in special education and the domains measures in the Iowa Inventory and PAYES offer preliminary support for the content validity of such applications of these instruments. However, special education serves students with a broad range of handicaps, so it is essential to focus on those handicaps for which adaptations of these measures may be most feasible and appropriate.

The Office of Special Education (OSE) in the U.S. Department of Education gathers information from state departments of education about the number of handicapped students served each school year. Figure 5 reviews the data reported by OSE for the 1979-1980 academic year. It shows that among handicapped students served under the P.L. 94-142, four categories account for more than 90 percent of the school-age children served. Learning disabled students account for 35 percent of this population, speech impaired youth are 29 percent of the total, mentally retarded students account for 20 percent, and emotionally disturbed students for eight percent. The remainder of the entire school-age population served under P.L. 94-142 was reported as just seven percent of the total of nearly 3.5 million special education students.

These data are even more conclusive among those served in the handicapped population from 18 to 21 years old. Mentally retarded youth account for 51 percent of those served under P.L. 94-142, with learning disabled youth reported at 23 percent, emotionally disturbed at eight percent and speech impaired students at seven percent. The total population of handicapped youth reported as receiving services showed that the greatest demand again fell into three primary groups: learning disabled (32 percent), speech impaired (29 percent), and mentally retarded (22 percent).

Figure 5

Handicapped Children Receiving Special Education Services
as Reported by States for 1979-1980

	School-Age Youth Served		Total Handicapped
	6-17 years	18-21 years	Population Served
Learning Disabled	1,218,166	28,824	1,281,395
Speech Impaired	1,016,095	5,939	1,188,973
Mentally Retarded	687,182	63,646	881,739
Emotionally Disturbed	277,181	10,458	330,990
All Other Handicaps	247,544	15,661	352,579
Totals	3,446,168	124,528	4,035,685

Thus it appears that two sets of recommendations may be appropriate. The Iowa Inventory may be suitable for learning disabled (LD) and speech impaired (SI) students with appropriate adaptations, while PAYES is most likely to be helpful in working with mentally retarded (MR) and emotionally disturbed (ED) populations. Students with LD and SI handicaps also are more likely to achieve mastery of the career education skills and concepts common to the Brolin (1978) and Lamkin (1980) recommendations than students with many of the other handicaps. Similarly, MR and ED students may find the reading levels and conceptual complexity of the Iowa Inventory too difficult, but PAYES offers a reasonable alternative as long as the student is capable of following along and correctly marking an answer as PAYES is read aloud.

Possible Adaptations of the Measures

Semmel and Goh (1981) offer one of the more comprehensive reviews of career and vocationally related instruments which are suitable or may have been adapted for use with handicapped students. They identify four basic types of instruments and assessment procedures.

(1) Paper and pencil, multiple choice measures developed for use with regular populations but with the possibility of use with special education students, such as the Armed Services Vocational Aptitude Battery (ASVAB) or the Comprehensive Career Assessment Scale.

(2) Paper and pencil, multiple choice measured developed primarily for use with handicapped students, such as the San Francisco Vocational Competency Scale or the self-awareness measures of abilities and interests from Project Discovery.

(3) Non-verbal paper-and-pencil measures using pictures or illustrations to display content, such as the Wide Range Interest-Opinion Test, the Geist Picture Interest Inventory, or the Non-Verbal Aptitude Test Battery.

(4) Work sample behavior checklists and observation scales, such as the JEVS Work Samples, Micro-TOWER, and the Wide Range Employment Sample Test.

In its present form, the Iowa Inventory clearly fits the first category. The reading levels and conceptual difficulty at grades three and six are designed to be appropriate for students performing at or within one grade level of their assigned grades. The Iowa Inventory at grades nine and twelve are designed to be appropriate for students whose functional reading skills are within three grade levels of their assigned grades. Thus the most severe adaptations of the Inventory may be needed

at the lower grades, particularly in grade three. Several approaches may be examined.

(1) Oral administration of the existing instruments with special answer sheets or consumable booklets so that students could complete the measures as long as they read well enough to follow along and mark their intended responses.

(2) Whenever possible, simplification of vocabulary and syntax in item content to retain the meaning of the item with measurement at a lower level of difficulty. This option would require redevelopment of the measures in some domains (particularly economics) and at the lower grade levels.

(3) Increased use of item illustrations and non-verbal content would appear appropriate only if an entirely new set of measures were being developed.

(4) Flash-card, slide, or video-sound presentations would represent the most extreme level of change in the present measures; such changes also would require substantial redevelopment of the existing Iowa Inventory.

If comparisons between handicapped and non-handicapped students are intended to assess whether the goals of "mainstreaming" have a positive impact on the career development of handicapped students, the most appropriate adaptation may be to focus on the first strategy. This appears to be especially practical for LD and SI students for whom the possibility of success in fully competive, regular employment is a reasonable goal. Special administrative procedures and answer sheets also can be developed at relatively low cost, as can comparative data to assess the impact of such adjustments on the performance of both handicapped and non-handicapped students.

PAYES already incorporates elements of categories two and three above with extensive use of line drawings or illustrations to convey item content and language specifically simplified for use with educationally disadvantaged youth with poor reading skills. Pilot use of PAYES with MR and ED adolescents, therefore, may be appropriate with the existing guidelines and materials for oral administration.

Proposed Strategies to Assess the Appropriateness of Proposed Adaptations

Two primary approaches to assessing the feasibility of adapting PAYES and the Iowa Inventory are underway now. The first includes gathering expert opinion about the content validity and appropriateness of such measures for assessing the career development of special education students. The second strategy is preparation for a small pilot administration of each instrument with selected samples of handicapped students in the spring of 1982. Findings from the first source will help guide adaptation of materials and implementation of the pilot instruction.

Techniques for gathering expert opinion will draw upon several groups and strategies. A questionnaire and telephone survey will be carried out among officers of the CEC Division on Career Development, the AVA National Association of Vocational Education Special Needs Personnel, and the Special Education Research Special Interest Group of AERA. Major contributors to research in career education for special education students have been identified through focused journals and literature reviews and will be included in the survey. Based on recommendations from these sources, further survey data may be gathered from samples of the membership of the appropriate divisions and groups within CEC, AVA and AERA.

ETS has assembled a comprehensive list of experts in the fields of career education, vocational education, learning disability, speech impaired, mentally retarded, and emotionally disturbed. A stratified random sampling from this list will specify the participants for the mail survey. The selected experts will receive a set of materials for appropriate levels of PAYES and the Iowa Inventory. These materials will include background information, brief history, instrument specifications, a condensed version of this paper and a questionnaire.

Analysis of the questionnaire data will help identify subjects who will be interviewed further by telephone. The telephone interviews will be conducted to share the results of the mail survey and clarify alternative adaptations of each instrument. A sample list of questions for the mail and telephone surveys is given below.

1) Are the basic philosophies of the two instruments consistent with the existing career education models for the handicapped?

2) Are the instruments in your opinion derived from complete and comprehensive models appropriate for the special education populations? Are there any vital components missing?

3) Is there a match between the characteristics of the instruments and the special education groups specified for the study (viz., LD, MR)?

4) What is your opinion about using PAYES and/or the Iowa Inventory with selected special education students?

5) If considered inappropriate in their present form, do you believe that modifications such as change in test administration procedures (e.g., oral reading of directions, test items and response options) will be effective with the handicapped? What other adaptations (inexpensive) merit further consideration?

6) Are there any other special education groups which can also benefit from these measures? If so, specify them.

Pilot administration of the Iowa Inventory and PAYES in the spring of 1982 is expected to focus primarily on LD and MR students, respectively. A matrix sampling design in which each participating group of special education students will complete from three to four of the seven domains within each instrument is expected to reduce the administration time for teachers. Comparisons will then be made between item difficulty and discrimination indices for the handicapped populations and those for non-handicapped students to isolate items or domains in which special education students experience difficulty with the instruments.

Students participating in this study are likely to come from school districts located in Illinois and Iowa. In no case will a student be measured on all the seven scales. As mentioned earlier, a matrix sampling plan will be used to sample scales and students.

The learning disabled students selected for this study will be randomly divided into two groups: one group will receive the Iowa instrument in its present form and the other will receive the modified version. A different sample of mentally retarded students will receive the PAYES instrument and assessed.

Once the data are collected, standard item analytical procedures will be applied. In addition to the quantitative data, qualitative data will also be collected by interviewing the special education students and the test administrators. Data on students reaction to the current version, ideas for refinement and other suggestions will be collected. The test administrators will also be interviewed to cross validate the students comments and to collect data the students can not provide (e.g., data on frustration level, confusion among students, etc.).

A list of questions for the data analysis:

1. Is there a significant different in performance between the two groups of LD on each one of the scales at each level?

2. Is there a significant difference in performance on each one of the seven scales at selected grade levels between the learning disabled and the "regular" students?

3. Is there a significant difference in performance between the target population of PAYES and the mentally retarded?

4. What are the implications of the study regarding adaptations? If modifications are drastically different does it imply the concept of mainstreaming in career education is an Utopia?

The following statistical procedures will be used to analyse the quantitative data: Profile analysis (Morrison, 1967), Hotelling's T square (Tatsuoka, 1971), Mahalanobi's D square (Cattell, 1966) and all types of summary statistics. Non-quantitative procedures which will be used to analyse the data include: interviews, observations and documents. They will be analysed according to procedures recommended by Bodgan & Taylor (1975).

Conclusions

The primary objective of career education activities for handicapped students is to help prepare all students for the least restrictive career and employment opportunities they can manage. Edwin Martin, then deputy director of the Bureau of Education for the Handicapped, clarified the problem by noting in 1973 that 21 percent of the handicapped students leaving school were entering appropriate employment or college, 26 percent were likely to be unemployed, and 40 percent were headed for jobs far below what their skills and training potential could qualify them for. He set as the goal that "every handicapped child who leaves school (should) have had career education training relevant to the job market, meaningful to his career aspiration, and realistic to his fullest potential" (1974, p. 1).

There is little evidence today that these goals have been reached for either handicapped or non-handicapped students. Part of the difficulty in offering such evidence is the absence of measures which treat career development as a continuous process. The Iowa Career Education Inventory offers such a resource. In addition, modification of administrative procedures to facilitate its use with handicapped students should offer a means of assessing how well students in special education are mastering the career education skills and concepts implicit in successful preparation for total participation in society.

A different objective applies for those populations which may be suitable for use of PAYES. Since this set of measures already is designed for use with poor readers in an orally administered situation, very little adaptation may be required. In no case would a student who is capable enough to master the skills and concepts measured in the IOWA Inventory be a suitable client for PAYES. However, many MR and ED adolescents may find the expectations and difficulty level of PAYES appropriate as measures of their readiness for training or employment.

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